DOCUMENT RESUME

ED 027 567 40 CG 003 570

By-Mattson, Robert H.; Buckley, Nancy K.
Teacher Effectiveness in Control of Child Behavior. Section Three. Interim Report.
Oregon Univ., Eugene.
Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.
Bureau No-BR-6-1308
Pub Date [68]
Grant-OEG-4-6-061308-0571
Note-14p.
EDRS Price MF-$0.25 HC-$0.80
Descriptors-Class Management, *Classroom Environment, Classroom Techniques, *Effective Teaching, *Pilot Projects, *Research, Teacher Behavior, *Teacher Evaluation, Teaching Conditions, Teaching Skills

Within the classroom, the teacher is an improtant social variable who controls other environmental variables. Some research on teacher effectiveness has considered personal or interaction variables. In order to study the variable of teacher test organization, a pilot study was conducted in two elementary schools in Eugene, Oregon. Each teacher was evaluated on ability to handle behavior problems or deviancies within the classroom. The evaluation instruments were a background questionnaire, behavior dimension ratings by principals, and ranking of global effectiveness by a panel. There was high correlation (.87) between effective teachers and smoothness of transition periods. Correlation (.78) was found between teacher involvement with outside activities and teacher effectiveness. A study of teacher lesson plans proved many of those plans too vague to use as a technique for measuring length and variety of tasks. Specific hypotheses for further investigation deal with (1) organization of the teaching day, (2) activity variety, (3) transition periods, and (4) reinforcement. (KP)

ED027567
BR-6-1308-INTERIM
SECTION III
OE-BR
PA-48

Section Three

# INTERIM REPORT

Project No. 50-4464
Grant No. OEG 4-6-061308-0571

## Teacher Effectiveness in Control of Child Behavior

Prepared by:

Robert H. Mattson
Nancy K. Buckley

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

CG 003570

# TEACHER EFFECTIVENESS IN CONTROL OF CHILD BEHAVIOR

Robert H. Mattson Nancy K. Buckley

University of Oregon

Recent evidence from behavioral literature strongly supports the contention that deviant behavior of children is maintained by specific environmental factors. Analysis of child behavior generally indicates that a variety of environmental factors account for adaptive or maladaptive behavior. In the classroom, specifically, setting variables play an important part in determining how a child performs socially and academically. Within this setting, the teacher is an important social variable and controls a variety of other environmental variables.

The effectiveness of teachers has been studied from several frames of reference but none have clearly established a set of crucial variables which could become a basis for efficient measurement, evaluation and prediction of teacher effects on child behavior. Observation of teacher performance and effectiveness, made in follow-up observations of disturbed children involved in the engineered classroom project, suggested teacher "busyness" and teacher planning as promising control variables. A review of the literature on teacher effectiveness suggested the importance of additional variables. Pilot work with these variables has been encouraging. A brief review of literature and results of pilot research are reported in this paper primarily to support the need for extended investigation relating specific teacher performance to pupil performance.

Related Literature

Much of the research on teacher effectiveness has viewed the teacher and the setting events that she controls as a single global variable. Outcomes have likewise most often been viewed as global. The authors are convinced that specific teacher behaviors should be evaluated as they relate to specific expected behavioral outcomes in children. Research reviewed in this paper has been selected because it appears to support evaluative focus on specific variables. Relevant analysis of teacher effectiveness has been reported in terms of the following models.

Gallagher and Aschner (1963) utilized analysis of classroom interaction as an approach to studying teacher effectiveness. As the name implies, the experimenters were looking at teaching in terms of processes rather than as end products. This approach is based on the assumption that classroom operation is shaped by specific "ground rules" between teachers and pupils. Classroom interaction was tape recorded and then coded for use on a flow-chart model. The categories were based on Guilford's definitions of intellect--cognitive memory, convergent thinking, divergent thinking, evaluative thinking and routine.

A perceptual cognitive theory for looking at teacher effectiveness has been proposed by Kerlinger (1963). This approach suggests studying attitudes of the judges or raters in relation to their effect on perceptual judgments. Pilot research by Kerlinger suggests a positive correlation between the Progressive or Traditional attitudes of judges (N = 40) and their perceptions of effective teachers.

Some researchers choose to look at effectiveness along several dimensions such as process, product and "concomitants" (e.g., Ryans, 1960). Mitzel (1957) added a fourth factor of "prediction sources" which were teacher personality and training factors. Biddle (Biddle and Ellena, 1954) discusses a seven-variable model for teacher effectiveness. The variables include formative experiences, teacher properties, teacher behaviors, immediate effects, long term consequences, school and community contexts, and classroom situations. Biddle explored a broad range of possible variables, but specifying hypotheses and collecting research evidence to support this model remains to be done.

A widely used scale for measuring classroom effectiveness has been the Observation Schedule and Record (OScAR) developed by Medley and Mitzel (1958). It includes five observation sections; activity, grouping, materials, subject and expressive behavior. It was designed to record verbal and non-verbal teacher-student interaction with a minimum of observer judgment. Gordon (1966) used the OScAR with elementary school male teachers (N = 20) and female teachers (N = 49) and secondary school female teachers (N - 33). He found among the female teaching interns a positive correlation between "disorderly" pupil behavior and observed teacher hostility and a negative correlation between "disorderly" pupil behavior and teacher supportive behavior.

David Ryans (1960) developed an observation technique for measuring teacher competence which largely ignores classroom interaction. Observers rate teachers from one to seven on dimensions such as harsh-kind, aloof-responsive, etc. He reports that "pupil behavior" appears to be rather closely related to teacher behavior in the elementary school and almost unrelated at the secondary school level.

Ned Flanders (1960) created an observation technique for measuring verbal interaction in the classroom. Teacher statements are classified according to direct or indirect comments and student statements are categorized as responding or initiating. A third category is that of silence or confusion. This type of observation system lends itself to formation of a matrix design.

All of these approaches consider either personal or interaction variables in relation to teacher effectiveness. The influence of the teacher's orientation toward her work schedule has largely been overlooked. Student behavior has generally been considered a function in part of the study skills and organizational factors which he develops. The authors have proposed that these are likely to be important relationships between a teacher's work orientation in instructing children and behavior problems in the classroom.

One of the most useful studies of effective behavior control in the literature to date has been that of Kounin, Friesen and Norton (1966). The authors used video tape recordings in 30 regular school classrooms at half-day intervals in grades 1-2 and 3-5 where at least one child in each class was identified as emotionally disturbed. Behaviors were coded during academic activities both for teacher management techniques and child responses.

Becker, et. al. (1967) report on attempts to alter teacher behavior by giving them a program of instructions to follow. Briefly, the program involved: (1) making rules explicit, (2) ignoring inappropriate behavior, and (3) praising and attending to desirable behaviors. The experimenters found that manipulating teacher behavior can reduce deviant behaviors in children.

Further study by the Becker associates (Thomas, D. R. et. al, 1968) used "normal" children in a regular classroom. Their findings "emphasize again the important role of the teacher in producing, maintaining, and eliminating disruptive as well as pro-social classroom behavior. Hall, et. al. (1968) found similar results for contingent teacher attention on the study behavior of 1st and 3rd grade pupils.

The variable of teacher organization may, in part, account for the success of structured teaching techniques. Carl Bereiter and Siegfried Engelmann (1966) have noted success with attempting to control the teacher variable by making available standardized procedures for teachers to use with disadvantaged children. The teacher is given an outline to follow in teaching various concepts and instructed in the appropriate ways to respond to student answers.

Programmed texts and machines are further examples of standardized, systematic presentation of materials which have acclaimed considerable success (e.g., Skinner, 1958; Galanter, 1959; Lumsdaine and Glaser, 1960).

## Pilot Study

A pilot study was conducted in two public elementary schools in Eugene, Oregon. Each teacher in grades one through six (N - 27) was evaluated on ability to handle behavior problems or deviancies within the classroom. The instruments of evaluation were a questionnaire defining teacher background and experience factors, rating by principals of specific behavior dimensions observed in the classroom, and ranking of global effectiveness by a panel (i.e., principal, remedial teacher and counselor).

A panel of educators and psychologists--a school psychologist, a classroom teacher, an educational psychologist, an educational administrator, and a school supervisor--cooperated in reading, evaluating and revising the rating scale and questionnaire.

The two principals rated the teachers on specified dimensions. They also submitted the questionnaires to the teachers for their responses. Since the results were to be used for experimental purposes only, no mention was made of evaluation to the teachers. The questionnaire items were based on hypotheses specifying variables judged to be related to teacher effectiveness. In scoring, the questions were weighted so that each hypothesis received equal emphasis.

Teachers falling above the median in total score on the teacher questionnaire and principal rating were considered successful. Those falling below the median were considered unsuccessful. A tetrachoric $r_t$ was obtained for the relation between each item and total effectiveness score.

## Results

Hypotheses examined and results obtained follow:

1. A teacher who does not provide a smooth flow between subject areas and who reverts back to a previous activity tends to have high deviancy and low work involvement. The transition periods between activities are times when deviancies may be more likely to occur. Kounin, Friesen and Norton (1966) made the following statement with regard to teacher management of transition periods:

> "There are a sufficient number of significant correlations to justify the conclusion that one meaningful parameter of classroom management pertains to techniques of managing transitions.

> This dimension of classroom management, moreover, applies to both E (emotionally disturbed) and non-E (non-disturbed) children in the same direction (1966, p. 9)."

The authors found a tetrachoric $r_t$ of .87 between principal judgments of effective and ineffective teachers and principal rating regarding smoothness of transition periods. That is, those teachers who were rated as successful tended to have smooth transition periods and for unsuccessful teachers the transition periods involved confusion and disruptions.

2. Teacher involvement with outside activities correlated -.78 with teacher effectiveness in the pilot project. That is, teachers who were highly involved with outside activities (thus having less time to devote to lesson organization and preparation) tended to receive total scores which classified them as ineffective.

3. Approach to lesson plan preparation by teachers. Teacher lesson plans were studied for each teacher in school #1. Five day samples, selected from the past seven months were tabulated. The weeks were selected randomly with one sample for each of the five week days obtained. The purpose of studying the plans was to determine the feasibility of using this as a technique for measuring length and variety of task assignments. It was discovered that while some teachers had complete plans, others were too vague to determine what activities were presented. However, the willingness of teachers to have the experimenter review their plans suggests the possible success of this approach with necessary alterations.

Implications for Further Research

Research to establish crucial relationships and adequate measures will require thorough investigation. The need for specificity in relating teacher variables to outcome variables is, however, becoming quite clear. Some specific hypotheses for investigation suggested by the experiences of the experimenters to date include:

1. Organization of teaching day.
    a. Student attention as a function of lesson length. It is likely that teachers who break the subject matter into smaller sections over shorter lengths of time are better able to keep the attention of all class members. For example, rather than using a work book for grammar, writing, and spelling for 70 minutes, it is considered more advantageous to separate these into shorter blocks of time. It appears that this is one of the merits of the system of rotating classes which is found at the junior high and high school level and recently at a few experimental grade schools.
    b. Clear initial delineation of procedure for each instructional activity is probably functionally related to student performance. The teacher should have specific performance objectives and goals for quality and quantity of class assignments which she relays to the students. Lesson plans are an integral part of this variable. A teacher who writes only the activity--i.e., reading--and page number in her lesson plans probably proceeds with a lack of variety in class activities.

c. Student performance is no doubt related to availability of appropriate materials. The time spent trying to organize materials before each activity possibly allows for deviant behavior and noise to occur. A teacher who prepares materials before the start of the day likely leaves less time for inappropriate behavior.

2. Activity variety.

   a. The variety of approaches (e.g., discussion, skill-oriented games, lectures, etc.) utilized by the teacher is probably important in maintaining the interest of the class. The type of approach, ideally, should vary from one subject to another during the day and within subject matter areas over time.

   b. Classroom control is probably in part a function of individualized programs to meet the needs of all students. When a student is bored or restless from work that is not at his level--either too hard or too easy--disruptive, non-task oriented behaviors arise. In addition, the materials should be presented in a logical, sequential order. The activities should be paced so that they proceed rapidly but not too rapidly for the students to grasp the concepts.

3. During periods of transition between two activities disruptive behaviors are more likely to occur. Specifics of teacher planning, materials and equipment as related to facilitating smooth transition should be investigated.

4. Student performance is clearly, in part, a function of the reinforcers available to them. Whether the reinforcers are

intrinsic (successful completion of task) or extrinsic (praise, gold stars, etc.) the teacher should make some provision for an adequate reinforcing climate for all students. The relationship of availability of reinforcers to teacher organization and planning should be studied.

## Summary and Conclusions

The purpose of this paper is not to ascribe all differences in effectiveness to the single dimension of teacher task organization. It appears, however, to be a variable which could be easily identified, measured, evaluated and manipulated.

There are several possible ways to identify and measure task approach or orientation of teachers. Direct observation of classroom organization by independent observers would yield either a multivariable or composite score. Using a time sampling technique, observers could record frequency of emitted behaviors on the part of teachers and students.

Another possibility would be to have the principal rate the teachers on the dimensions connected with classroom organization. A rating system of four dimensions (e.g., 75-100% of the time the response occurs; 50-75%; 25-50%; 0-25%) for each of the six component variables could easily be implemented by the principals. This technique, while expending less personnel time, depends on the accuracy of the principal's perceptions of what is occurring.

The teacher is also a possible resource in obtaining information on classroom organization. If no implication of evaluation were made, the teacher could feel free to respond in an objective manner. The teacher

could be asked to record all activities during the day and their duration. From this data the principal or appropriate auxiliary personnel could record quantifiable marks for number of separate activities and amount of time at each activity. A record could also be kept of individual programs for students. This approach, if feasible, represents a minimum expenditure of time and personnel.

The crucial problem is the manipulation of teacher approaches so that organizational effectiveness could be assured or enhanced. Unlike personality or physical factors, efficient and effective ways to approach a task could be taught as part of teacher training.

## References


Anderson, N. N. The measurement of domination and of socially integrative behavior in teachers' contacts with children. Child Development, 1939, 10, 73-89.

Anderson, H. H. and Brewer, H. H. Studies of teachers' classroom personalities I: dominative and socially integrative behavior of kindergarten teachers. Psychological Monographs, 1945, 6.

Anderson, H. H. and Brewer, J. E. Studies of teachers' dominative and integrative contacts on children's classroom behavior. Psychological Monographs, 1946, 8.

Becker, W. C., Madsen, C. H., Arnold, C. R. and Thomas, D. R. The contingent use of teacher attention and praise in reducing classroom behavior problems. The Journal of Special Education, 1967, 1 (3), 287-307.

Bereiter, C. and Engelmann, S. Observations on the use of direct instruction with young disadvantaged children. Journal of School Psychology, IV (3), 1966, 55-62.

Biddle, B. J. and Ellena, W. J. (Ed.) Contemporary Research on Teacher Effectiveness. Holt, Rinehart & Winston, Inc., 1964.

Buckley, N. Teacher effectiveness in managing deviant behaviors. Unpublished master's thesis, University of Oregon, 1967.

Flanders, H. A. Interaction Analysis in the Classroom: A Manual for Observers. Unpublished manuscript, University of Michigan, 1960. (Biddle, 1964)

Galanter, E. (Ed.) Automatic Teaching: The State of the Art. New York: John Wiley & Sons, 1959.

Gallagher, J. and Aschner, M. J. Preliminary report on analysis of classroom interaction. Merrill-Palmer Quarterly, 1963, 9, 183-194.

Gordon, I. J. The assessment of classroom emotional climate by means of the observation scale and record. Journal of Teach. Education, 1966, 17, 224-232.

Hall, R. V., Lund, Diane and Jackson, Deloris. Effects of teacher attention on study behavior. Journal of Applied Behavior Analysis, 1968, 1, 1-12.

Kerlinger, F. N. Educational attitudes and perceptions of teachers: suggestions for teacher effectiveness research. The School Review, 1963, 71 (1), 1-11.

Kounin, J. S., Friesen, W. V. and Norton, A. E. Managing emotionally disturbed children in regular classrooms. Journal of Educational Psychology, 1966, 57 (1), 1-13.

Lumsdaine, A. A. and Glaser, R. (Ed.) Teaching Machines and Programmed Learning: A Source Book. Washington, D. C.

Medley, D. M. and Mitzel, H. N. A technique for measuring classroom behavior. Journal of Educational Psychology. 1958, 49, 86-92.

Metzel, H. E. A Behavioral Approach to the Assessment of Teacher Effectiveness. New York: Office of Research and Evaluation, Division of Teacher Education, College of the City of New York, 1957.

Ryans, D. G. Characteristics of Teachers: Their Description, Comparison, and Appraisal. Washington, D. C.: American Council on Education, 1960.

Skinner, B. F. Teaching machines. Science, 1958, 128, No. 3330, 969-977.

Thelen, H. A. Teachability Grouping. U. S. Office of Education, Project No. 428, 1961.

Thomas, D. R., Becker, W. C., and Armstrong, Marianne. Production and elimination of disruptive classroom behavior by systematically varying teacher's behavior. Journal of Applied Behavior Analysis, 1968, 1, 35-45.